IN THE CLAIMS

Please add new claims 31-33 and amend the currently pending claims as follows.

This listing of claims will replace all prior versions, and listings, of claims in this application.

Listing of Claims:

1. (Currently amended An apparatus comprising:

a polymer-based material, having a first coefficient of thermal expansion, interconnecting an integrated circuit and an underlying substrate, having a second coefficient of thermal expansion being approximately the same as the first coefficient of thermal expansion; and

a plurality of magnetically aligned magnetic material particles in said polymer-based material to form an electrically conductive path through a part of said polymer-based material.

2. (Original) The apparatus of claim 1 wherein said polymer-based material is selected from a group consisting of conductive polymers, thermoplastic polymers, and thermoset polymers.

3. (Original) The apparatus of claim 1 wherein said polymer-based material is a polyamide.

4. (Original) The apparatus of claim 1 wherein said polymer-based material is an ultra-violet light curable epoxy.

5. (Original) The apparatus of claim 1 wherein said magnetic material is selected from a group consisting of ferro-magnetic metal, a magnetic ceramic, and a ferro-electric material.

6. (Original) The apparatus of claim 1 wherein said apparatus is comprised of approximately 40 percent by weight polymer-based material and approximately 60 percent by weight magnetic material particles.

7. (Original) The apparatus of claim 1 wherein said magnetic material particles are acicular shaped.

8. (Original) The apparatus of claim 1 wherein said polymer-based material is a photo-resist material.

9. (Currently amended) The apparatus of claim 1 wherein said magnetic material particles form part of the electrically conductive path from ~~a component to an~~ the integrated circuit to the underlying substrate.

10. (Original) The apparatus of claim 1 wherein the dimensions of the magnetic material particles are approximately one micron by two microns by ten microns.

11. (Original) The apparatus of claim 1 wherein said magnetic material is selected from a group consisting of iron, barium strontium titanate, strontium tantalum oxide, and peroskovites.

12. (Withdrawn) A method comprising:

mixing a composition of a magnetic material particles and a polymer-based material;

depositing said composition onto a first component;

placing a second component onto said first component at a site of the deposited composition;

applying a magnetic field to said composition, to form an aligned path of said magnetic material particles and bend said aligned path of magnetic material particles to form part of a conductive path between said first component and said second component; and

solidifying said polymer-based material.

13. (Withdrawn) The method of claim 12 further comprising putting said composition through a screen before depositing said composition onto said first component.

14. (Withdrawn) The method of claim 13 wherein said putting includes using a squeegee.

15. (Withdrawn) The method of claim 12 further comprising pre-coating said first component before depositing said composition.

16. (Withdrawn) The method of claim 13 wherein said pre-coating comprises a thin layer of said composition.

17. (Withdrawn) The method of claim 12 further comprising testing the conductive path between said first component and said second component.

18. (Withdrawn) The method of claim 12 wherein an ultra-violet light is applied to said composition to solidify said polymer-based material.

19. (Withdrawn) The method of claim 12 wherein said polymer-based material's temperature is changed to solidify said polymer-based material.

20. (Withdrawn) The method of claim 12 wherein said polymer-based material is solidified and said magnetic field are applied at approximately the same time.

21. (Withdrawn) The method of claim 12 wherein said bending the aligned path includes using a magnetic field from a metallic surface.

22. (Withdrawn) The method of claim 12 where dimensions of said magnetic material particles are approximately one micron by two microns by ten microns.

23. (Withdrawn) A system comprising:

a substrate;

a component coupled to said substrate; and

a composition of magnetic material particles and a polymer-based material coupled to said component and said substrate

24. (Withdrawn) The system of claim 23 further comprising screen pads coupled to said substrate.

25. (Withdrawn) The system of claim 23 wherein said magnetic material particles form a conductive path between said component and said substrate.

26. (Withdrawn) The system of claim 23 wherein substrate is selected from a group consisting of printable circuit boards, aluminum lead frames, and fine pitch ball grid arrays.

27. (Withdrawn) The system of claim 23 wherein said composition is comprised of approximately 40 percent by weight of the polymer-based material and approximately 60 percent by weight of the magnetic material particles.

28. (Withdrawn) The system of claim 23 wherein said magnetic material particles are acicular shaped.

29. (Withdrawn) The system of claim 23 wherein said polymer-based material is a photo-resist material.

30. (Withdrawn) The system of claim 23 wherein a coefficient of thermal expansion of the polymer-based material is approximately equal to a coefficient of thermal expansion of the substrate.

31. (New) An apparatus comprising:

a polymer-based material; and

a plurality of magnetically aligned, acicular shaped magnetic material particles in said polymer-based material to form an electrically conductive path through a part of said polymer-based material.

32 (New) The apparatus of claim 31 wherein said polymer-based material has a first coefficient of thermal expansion and interconnects an integrated circuit and an underlying substrate having a second coefficient being approximately the same as the first coefficient of thermal expansion.

33. (New) The apparatus of claim 32 wherein said magnetic particles form part of the electrically conductive path from the integrated circuit to the underlying substrate.